

ABSTRACT OF THE INVENTION

The present invention concerns a reactive carrier that forms no by-products during melt injection of polymer into articles such as sheets, films, fibers and containers. The reactive carrier is used to mix additives into the polymer resin. More particularly, the invention relates to the use of one or more cyclic anhydrides or substituted cyclic anhydrides as the reactive carrier. The polymer can be polyester or polyamide. Suitable cyclic anhydrides are those with a melt point of less than the polyester or polyamide, preferably less than about 160°C, and more preferably less than about 125 °C. Most preferable are cyclic anhydrides with a melt point less than about 100 °C and especially suitable are those that are liquid at room temperature (25°C). The cyclic anhydride may be selected from the group of succinic anhydride, substituted succinic anhydride, glutaric anhydride, substituted glutaric anhydride, phthalic anhydride, substituted phthalic anhydride, maleic anhydride, substituted maleic anhydride, or mixtures of two or more of these.